

**Revised Traffic Analysis  
4444 Indian Valley Road  
San Miguel, San Luis Obispo County, California 93446  
APN's: 027-420-001, -002, -003, -005, -009, -016**

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**November 2, 2006**

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## Executive Summary

Based on the findings of this investigation we have determined that the traffic impacts of the proposed mining operation will be less than significant. The proposed project will generate a maximum of 32 truck loads (64 trip-ends) per day, and will not result in an increase in the Level of Service requirements for the Community of San Miguel. The travel routes for the project enter into the Higgins Associates (2006) study area; however no trucks from the project will be utilizing the study area within AM or PM peak hours. Business hours will be from 8 AM to 4 PM. Employees will be leaving the project area during the 4 PM peak traffic hour. Employee trips are expected to generate 4 PM peak hour trip-ends in the westbound direction through the River Road / 14<sup>th</sup> Street and Mission Street intersection. Due to the minor increase in trip-ends within the Higgins Associates study area during peak PM hours, no adverse impacts from this project are expected and no additional improvements are recommended along the truck route.

There are no obstructions to line of sight along the truck route northbound or southbound of encroachment areas with the exception of the 387 ft line of sight for vehicles approaching encroachment A from to the south (safe for vehicle speeds up to 45 mph). Encroachment A (the southernmost access point on Indian Valley Road) may require further safety installments informing northbound traffic of the trucks ahead and/or to reduce speed due to a low point in the topography south of the encroachment.

One school is located along the truck route (1 block west of Mission Street at 16<sup>th</sup>), however little if any traffic related to the project is anticipated in the vicinity of the school. Some residential and commercial zones exist along the truck route; however no significant impacts or hazards associated with these zones are expected.

The net increase to existing conditions in average daily trip-ends is less than 2 percent. Due to the low levels of traffic generated by the proposed project, the potential immediate and cumulative impacts are expected to be less than significant.

## **1.0 Introduction**

This report presents the results of a Traffic Study conducted for the Subject Property. Sierra Delta Corporation (“SDC”) was retained by Mr. Chad Pankey, (“Client”) to conduct the study. Authorization to proceed on the project was given on December 21, 2005.

### **1.1 Purpose**

The purpose of the investigation is to determine the anticipated impacts on traffic from mining of gravel and sand on the Salinas River. The Subject Property is located on Indian Valley Road in San Miguel; Assessor’s Parcel Numbers 027-420-001, 002, 003, 005, 009, and 016. Conclusions and recommendations are subject to modification if subsequent data is collected by SDC or others.

### **1.2 Background**

The Client is in the process of applying for a mining permit with the County of San Luis Obispo (herein after the “County”).

### **1.3 Detailed Scope of Project**

SDC was contracted by the Client to perform this investigation on the Subject Property. The study conducted included the following tasks:

- Documents review
- Visual reconnaissance of the Subject Property
- Report preparation
- Field visit to complete line of sight measurements on September 15, 2006.
- Revised report preparation

### **1.4 Limitations and Exceptions**

The professional services conducted by SDC have been performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made. The professional services performed do not guarantee compliance with federal, state or local laws. This report is not a bidding document, and any contractor or consultant reviewing this report must draw his/her own conclusions regarding further investigation or remediation deemed necessary for the project.

Project services have been completed in agreement with SDC’s contracted understanding with the Client. This document and the information contained herein have been prepared for the use of the Client and his assigned parties.

This Report was prepared by Sierra Delta Corporation (“Consultant”) for the sole and exclusive use of Mr. Chad Pankey. Nothing under the Agreement between Sierra Delta Corporation and its Client Mr. Chad Pankey shall be construed to give any rights or benefits to anyone other than Client and Consultant, and all duties and responsibilities

undertaken pursuant to the Agreement will be for the sole and exclusive benefit of Client and Consultant and not for the benefit of any other party. In particular, Consultant does not intend, without its written consent, for this Report to be disseminated to anyone other than Client or to be used or relied upon by anyone other than its Client. Use of the Report by any other person is unauthorized and such use is at the sole risk of the user. Anyone using or relying upon this Report, agrees, by virtue of its use, to indemnify and hold harmless, Consultant from and against all claims and damages arising out of, or resulting from the performance of the work by Consultant involving this Report.

## 1.5 Report Format

The Report is organized as follows:

- **Section 1.0- Introduction:** Provides information about the project's purpose, special terms and conditions, limitations and exceptions, and the procedures employed to compile this report.
- **Section 2.0- Project Location and Setting:** Provides information about the Subject Property including regional and vicinity maps.
- **Section 3.0- Traffic study:** Provides historical traffic information for the areas affected by this project, project related traffic requirements, a road map of the truck route to be utilized, and analysis of any potential traffic hazards associated with this project.
- **Section 4.0- Summary of Findings:** Provides a summary of findings for all potential impacts evaluated over the course of this investigation.
- **Section 5.0- References:** Provides bibliographic information on reports reviewed during this investigation.
- **Section 6.0- Qualification of Engineering Professional:** Discusses the qualifications of the civil engineer and Sierra Delta Corporation.

## 2.0 Project Location and Setting

### 2.1 Location

The Subject Property, identified as Assessor’s Parcel Numbers 027-420-001, 002, 003, 005, 009, and 016 is located in San Miguel, California. A Regional Map is included herein as Figure 1 and Vicinity Map is included herein as Figure 2.

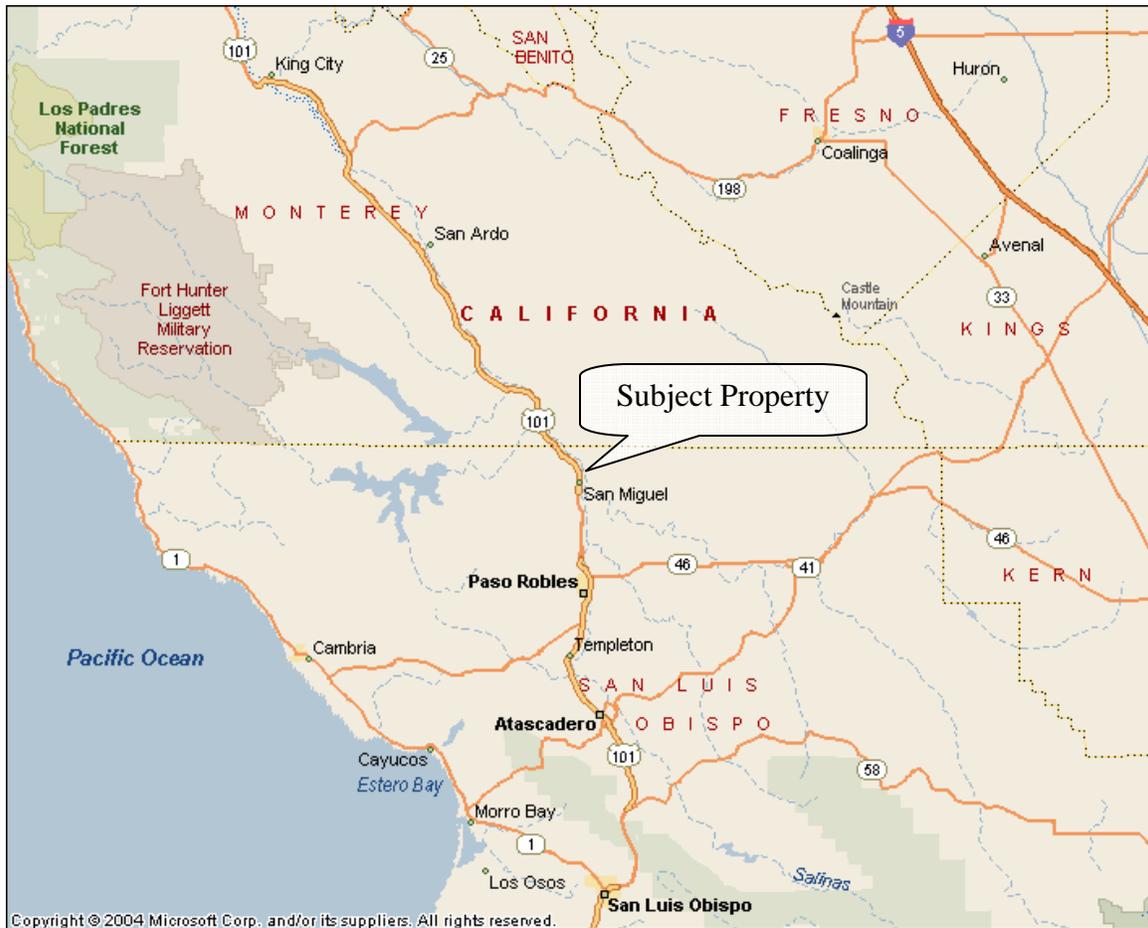


Figure 1: Regional Map



Figure 2: Vicinity Map with Approximate Subject Property Boundaries

## 2.2 Geographic Coordinates

Latitude: 35° 46' 36.8" N

Longitude: 120° 42' 3.7" W

## 2.3 Physical Setting

The Subject Property is located at 4444 Indian Valley Road, north of River Road, in San Miguel, California, in the Salinas River Valley. Current access to the site is via Indian Valley Road.

## 2.4 Project Description

The proposed project is a sand and gravel mining operation, in which sand and gravel will be skimmed from the Salinas River and Vineyard Creek channels. Minimal processing, limited to sorting with a screen, will occur on site to prepare material for final use. Extracted material will subsequently be loaded into trucks and hauled off site for

further processing or final use. The operation does not include trucking, and all trucks will be provided by the buyer of materials.

The project will require three separate access encroachments on to Indian Valley Road and River Road; however truck traffic will be limited to one encroachment at any given time. These encroachments are illustrated on the aerial photograph, included herein as Appendix A.

## **3.0 Traffic Analysis**

### **3.1 Project Traffic Requirements**

The proposed project has the capacity to fill a maximum of four (4) truckloads per hour, eight (8) hours per day, and five (5) days per week. One truckload is defined as each truck that enters the site, takes a load of sand and/or gravel, and departs, therefore each truckload constitutes two (2) trip-ends. Operating at maximum capacity, the project will generate 32 truckloads (64 trip-ends) per day, 160 (320 trip-ends) truckloads per week, and 640 truckloads (1,280 trip-ends) per month (on average). The maximum annual yield of sand and gravel for the project is 145,000 cubic yards and the capacity of a haul truck is 20 cubic yards. Thus, if the project achieves maximum annual yield a total of 7,250 truckloads (14,500 trip-ends) would be required per year to remove all extracted material. The mining operation will be open for business between the hours of 8am and 4pm, Monday through Friday. Under these operating hours, there will be no additional truck loads or truck trip-ends during the morning or evening peak traffic hours of 7am and 4pm.

The project will require up to 4 employees, amounting to 4 trip-ends between 7am and 8am, and 4 trip-ends between 4pm and 5pm.

#### ***3.1.1 Truck Route***

A truck route will be established for all truck traffic related to the project. The outbound truck route will direct the trucks south from the Subject Property to River Road, then west to Mission Street. Depending on the destination of the material, the trucks may go north or south on Mission Street to the appropriate onramp to Highway 101. The proposed truck route is illustrated in Figure 3 below. No trucks shall take any streets other than Mission Street to access the highway. The inbound truck route is to be the reverse of the outbound. The majority of the truck traffic associated with the projected is anticipated to use the southern portion of Mission Street, however the actual amount is dependent on the final destination for the product. Due to the level of growth and distance to population centers within San Luis Obispo County, the majority of the product is anticipated for use within the County of San Luis Obispo.

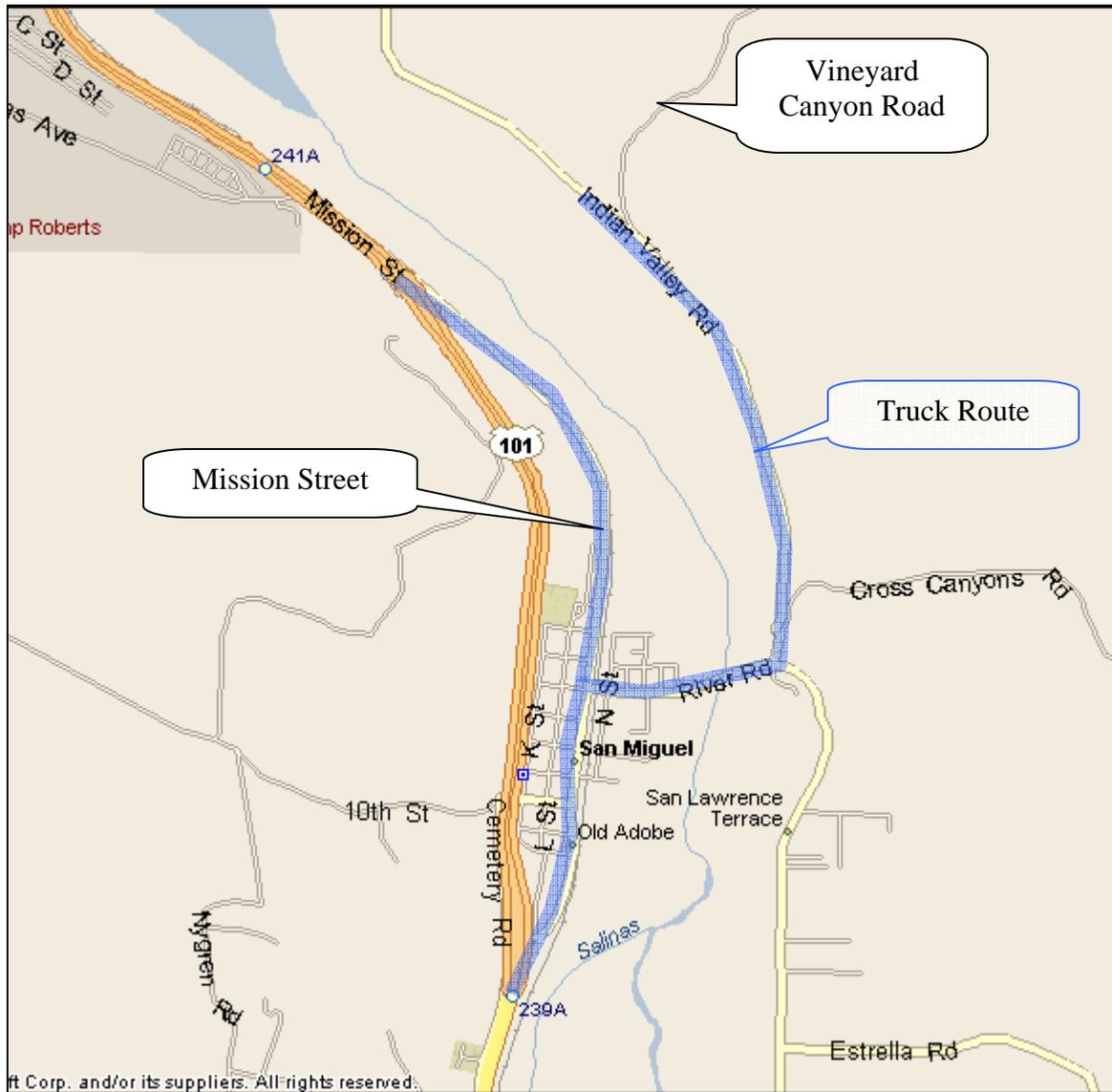
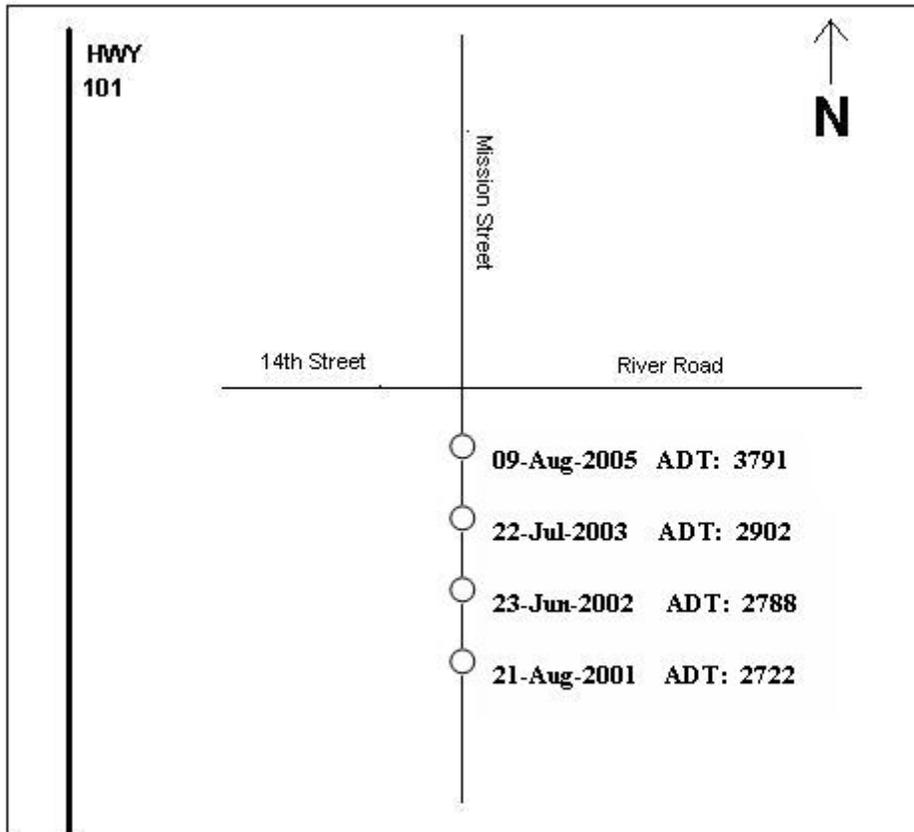


Figure 3: Truck Route Map

### 3.2 Existing Conditions

San Luis Obispo County traffic data from the Department of Public Works and a Traffic Circulation Study for the San Miguel area were reviewed for recent historic traffic conditions. Public Works Department data for the applicable roads are limited, with measurements at only location #1050 along Mission Street over the last 5 years (Figure 4). The most recent data available for Mission Street are from August of 2005, where the total Average Daily Trips for Mission Street north of Highway 101 (location #1050) was determined to be 3791 vehicle trips. These trips were totaled for both directions of travel, referred to as a two-way count.



**Figure 4: Historic Average Daily Trips (ADT) records on Mission Street, San Miguel, location #1050 (data from Department of Public Works, 2006)**

Higgins Associates conducted a traffic circulation study for San Miguel on behalf of San Luis Obispo County. The report, dated April 6, 2006, contained more recent traffic data for the major roadways in San Miguel. Traffic counts were collected at Mission Street and River Road / 14<sup>th</sup> Street during peak traffic hours (7-9 AM and 4-6 PM). The direction of travel for all vehicles was included in this study. The PM peak hour counts found 145 vehicles traveling west on River Road / 14<sup>th</sup> Street, with 101 of those turning south on Mission Street. 206 vehicles were observed traveling north on Mission Street, with 146 of those turning east on River Road.

### 3.3 Affects on Traffic

Project related traffic will increase daily vehicle trip-ends along the truck route by 72 trip-ends per day. Based upon the available data discussed in Section 3.2 approximate increases in traffic levels were calculated. Project business operational hours will be from 8 AM to 4 PM. The project will require up to 4 employees, amounting to 4 trip-ends between 4 PM and 5 PM, the peak PM hour. These trip-ends will be in the westbound direction through the Mission Street and River Road / 14<sup>th</sup> Street intersection. Table 1 and 2 below summarize these calculations:

**Table 1: Increase in total traffic on Mission Street (Department of Public Works 2006)**

<b>Roadway</b>	<b>Average Daily Trip-ends (ADT)</b>	<b>Proposed Daily Trip-Ends</b>	<b>Percent Increase</b>
Mission Street North of Hwy. 101 (location #1050)	3791	72	<b>1.9%</b>

**Table 2: Increase in directional traffic at PM peak hour (4 PM) at the Mission Street and River Road/14th Street intersection (Higgins 2006)**

<b>Roadway and Direction</b>	<b>Current Peak</b>	<b>Proposed Trip-ends</b>	<b>Percent Increase</b>
Eastbound River Road	206	0	<b>0.0%</b>
Westbound River Road	145	4	<b>2.8%</b>

### **3.3.1 Level of Service Impacts**

The truck route for the project proceeds south along Indian Valley Road, west onto River Road to Mission Street where trucks may proceed north or south to Hwy. 101 (Figure 3). The parcels surrounding the project area on Indian Valley Road are zoned for agricultural use. The parcels are large and density is low thus existing traffic volumes are low. The project will increase existing traffic volume by eight (8) trip-ends per hour during the hours of 8am to 4pm, Monday thru Friday. Barring a change in land-use designation for surrounding parcels, traffic volumes are not expected to increase significantly over the next 20 years along Indian Valley Road.

Higgins Associates (2006) addressed establishing of an acceptable Level of Service (LOS) for county maintained roads in the Community of San Miguel area of San Luis Obispo County. The report was prepared to help the County determine the need for future traffic controlling measures, including stop signs and stop lights. The truck route for this project passes thru the Higgins Associates study area once vehicles leave Indian Valley Road for North River Road.

LOS A is the lowest level of traffic, with free flowing conditions, and LOS F is the highest level of traffic, with traffic stopped or severely slowed due to the volume of traffic. San Luis Obispo County has established LOS C as the maximum acceptable level of service for overall intersection operation. Level C conditions consist of stable and acceptable traffic flow, with speed and maneuverability slightly restricted by higher traffic volumes.

According to the Higgins Associates report, current conditions during PM peak traffic are at LOS B (at 422 total trip-ends), indicating that traffic flows met County standards. The report also addressed the additional traffic from known potential future developments, including residential, commercial, and industrial for the San Miguel area. The projected future traffic conditions indicated an increase to as high as LOS D during evening peak conditions (at 794 total trip-ends). There was also a predicted increase in vehicle queues

under cumulative conditions which prompted a recommendation for installation of a traffic signal at the Mission/14<sup>th</sup> – River intersection to improve the ability of River Road traffic to clear the railroad crossing.

The proposed mining project will result in minor increases to existing conditions for Average Daily Trips (1.9%) and PM peak hour trip-ends (424 compared to 422, or 0.9%). The project cannot increase production, and thereby traffic volume, without new impact review, therefore cumulative traffic increases are smaller relative to changes in existing conditions (PM peak hour trip-ends increase of 0.5%). Due to these findings and the existing land-use zoning designations on Indian Valley Road a detailed Level of Service analysis was not performed for this project.

### 3.4 Potential Traffic Hazards

#### 3.4.1 Line of Sight

Indian Valley Road is a County road with no posted speed limits. The speed limit is assumed to be 55 mph; however some curves require traffic to reduce speed. If current prevailing speed is assumed to be 55 mph, the recommended stopping distance is 500 feet and the recommended line of sight distance for trucks completing a left-hand turn is 605 ft. (Cal Trans 2000). The proposed project includes three access encroachments onto Indian Valley Road. The two northern encroachments, B and C, (see Appendix A) have clear lines of sight in excess of 1000 ft. in either direction (Table 3). There are no obstructions from buildings, vegetation, or topography limiting visibility within that distance. Encroachment A is located at a topographic high point, with a clear, unobstructed line of site to the north of approximately 2000 ft. To the south of encroachment A (see Appendix A), Indian Valley Road bends to a topographic low point leaving only 387 ft. for line of sight stopping distance for northbound traffic (Table 3). A cautious driver would likely travel through this stretch at 45 mph due to the topography and curve in the road. The recommended stopping distance for traffic traveling at speeds of 45 mph is 360 ft (Cal Trans 2000). To further ensure this encroachment is safe, signage to establish a reduced speed and/or notify vehicles of trucks on highway may be installed to advise northbound traffic.

**Table 3: Access Point Coordinates and Sight Distances**

Access Points (S to N)	A	B	C
Encroachment Coordinates	35.76832, -120.68818	35.77522, -120.69606	35.77842, -120.70046
Northern Sight Limit Coord.	35.77257, -120.69243	35.78051, -120.70548	35.78051, -120.70548
Southern Sight Limit Coord.	35.76736, -120.68763	35.77257, -120.69243	35.77257, -120.69243
Northern Sight Distance	1,997 ft.	3,420 ft.	1,676 ft.
Southern Sight Distance	387 ft.	1,443 ft.	3,185 ft.

### **3.4.2 Residential and Commercial Zones**

Portions of the truck route pass through residential and commercial zones on 14<sup>th</sup> Street / River Road and Mission Street.

#### **3.4.2.1 14<sup>th</sup> Street / River Road**

The portions of 14<sup>th</sup> Street west of the San Miguel Bridge are primarily developed with residential. Some commercial exists near the railroad tracks and Mission Street. 14<sup>th</sup> Street is sufficiently wide for vehicle parking along either side without impairing traffic. Currently there is no sidewalk along this road; however dirt walking paths outside the roadway are evident along the right of way.

#### **3.4.2.2 Mission Street**

Developments along Mission Street are primarily commercial with some residential. Mission Street has a sidewalk on the west side of the street, and sufficient room for on-street parking without impairing traffic.

### **3.4.3 School Zones**

Larsen Elementary School, kindergarten through 8<sup>th</sup> grade, is located on the northwest corner of 16<sup>th</sup> Street and L Street, 1 block west of Mission Street. The significant majority of traffic from the project is anticipated to be southbound from 14<sup>th</sup> Street, and will not significantly interact with school traffic.

## 4.0 Summary of Findings

Based on the findings of this investigation we have determined that the traffic impacts of the proposed mining operation will be less than significant. The proposed project will generate a maximum of 32 truck loads (64 trip-ends) per day, and will not result in an increase in the Level of Service requirements for the Community of San Miguel. The travel routes for the project enter into the Higgins Associates (2006) study area; however no trucks from the project will be utilizing the study area within AM or PM peak hours. Business hours will be from 8 AM to 4 PM. Employees will be leaving the project area during the 4 PM peak traffic hour. Employee trips are expected to generate 4 PM peak hour trip-ends in the westbound direction through the River Road / 14th Street and Mission Street intersection. Due to the minor increase in trip-ends within the Higgins Associates study area during peak PM hours, no adverse impacts from this project are expected and no additional improvements are recommended along the truck route.

There are no obstructions to line of sight along the truck route northbound or southbound of encroachment areas with the exception of the 387 ft line of sight for vehicles approaching encroachment A from to the south (safe for vehicle speeds up to 45 mph). Encroachment A (the southernmost access point on Indian Valley Road) may require further safety installments informing northbound traffic of the trucks ahead and/or to reduce speed due to a low point in the topography south of the encroachment.

One school is located along the truck route (1 block west of Mission Street at 16th), however little if any traffic related to the project is anticipated in the vicinity of the school. Some residential and commercial zones exist along the truck route; however no significant impacts or hazards associated with these zones are expected.

The net increase to existing conditions in average daily trip-ends is less than 2 percent. Due to the low levels of traffic generated by the proposed project, the potential immediate and cumulative impacts are expected to be less than significant

## 5.0 References

Cal Trans. 2000. Division of Design. Highway Design Manual. Ch.200  
<http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>

Department of Public Works, San Luis Obispo County. 2006. Traffic Counts.  
<http://www.slocountytraffic.org/>

Higgins and Associates. 2006. San Miguel Traffic Circulation Study.

Microsoft Corporation. Streets and Trips [CD-Rom Computer File]. ASA, Bellevue, Washington (2001)

## 6.0 Summary of Qualifications

<b>NAME &amp; TITLE:</b>	Daniel McGee, RCE #51700 Registered Civil Engineer
<b>PROJECT ASSIGNMENT:</b>	Project Manager
<b>FIRM ASSOCIATION:</b>	Sierra Delta Corporation
<b>EXPERIENCE WITH FIRM:</b>	6 years
<b>WITH OTHER FIRMS:</b>	17 years
<b>EDUCATION:</b>	B.S., Civil Engineering, California State Polytechnical University San Luis Obispo, San Luis Obispo, CA
	M.S., Education, University of Southern California, Los Angeles, CA
	J.D. Law, University of San Diego School of Law, San Diego, CA
<b>REGISTRATIONS:</b>	Registered Civil Engineer #51700 (California) Licensed Attorney, California State Bar

### 6.1 Experience and Qualifications

Mr. McGee is a licensed attorney and registered professional engineer. He graduated from Cal Poly in 1983 with a degree in civil engineering. Upon graduation he was commissioned as an officer in the U.S. Air Force. In the Air Force he was involved in the design, construction and project management of projects such as the Space Shuttle Launch Complex at Vandenberg AFB, and the fast-paced build-up of a military base in Misawa, Japan. He then went to the University of San Diego School of Law while working full-time as an engineer with the City of Vista, California. He came back to San Luis Obispo in 1996 joining a private law practice, before taking on the responsibilities of Director of Development for Cal Poly's College of Engineering. He now provides independent consulting services.

## **6.2 Sierra Delta Corporation Profile**

SDC was founded in 1985, and offers environmental consulting services. The following sections provide a brief discussion of environmental services provided by SDC.

### **6.2.1 *Geologic Studies***

Sierra Delta Corporation (SDC) provides comprehensive consulting services for geological investigations. SDC has the in-house resources to prepare Geology / Seismic Investigations consistent with San Luis Obispo, Santa Barbara, Monterey, Santa Cruz, San Benito, and Santa Clara County Ordinances. SDC's professional geologists have experience in a wide variety of geological settings and project types, and can design and conduct the appropriate geological study to resolve the needs of each specific project. These surveys include, but are not limited to, literature searches, map reviews, aerial photograph interpretation, and non-quantitative observations by qualified professionals.

### **6.2.2 *Environmental Studies***

The SDC team possesses the technical skill and experience to design and conduct a variety of ecological and environmental investigations. Many of the investigations recently conducted have been, and are, conducted in conjunction with the planning of development projects. Areas of specialization would include:

#### **6.2.2.1 *Resources Management***

SDC provides resource management services including:

- mitigation planning
- water resources management
- wildlife management
- grazing management
- hazardous waste management
- cultural resources management
- water rights surveys
- visual quality analyses
- floodplain reclamation
- wetland habitat development and restoration
- 

#### **6.2.2.2 *Lake Management***

SDC provides lake management services including:

- follow-up services
- lake O&M plans
- lake restoration
- leak detection
- odor control
- proper utilization of secondary effluent for golf course irrigation
- water budgets
- water quality analyses

### **6.2.2.3            *Ecological Research***

SDC provides ecological research including:

- aquatic and terrestrial ecology
- endangered species studies
- vegetation surveys and studies
- fisheries biology
- riparian habitat studies
- soil science
- wildlife biology
- water quality analysis

### **6.2.2.4            *Wetland Regulation***

SDC provides wetland services including:

- wetland boundary determination using the multi-parameter approach
- preliminary assessment of regulatory requirements
- preliminary project design consultation regarding regulatory compliance
- determination of Clean Water Act (wetlands) jurisdiction
- 404(b)(1) alternatives analysis
- preparation of U.S. Army Corps of Engineers 404 permit
- mitigation planning, project re-design and agency negotiation
- public hearing participation
- EIR/EIS contractor liaison and/or management
- procurement of water quality certification; and other associated permits, certifications and authorizations as required

### **6.2.2.5            *Environmental Assessments and Impact Statements***

SDC provides Impact Assessment services including:

- habitat characterization
- in-field water quality sampling
- inventories including terrestrial vegetation, aquatic vegetation, invertebrates, fishes, large mammals, birds, reptiles and amphibians, bathymetry, hydraulics, background acoustics, visual/aesthetic setting
- statistical analyses / data processing
- laboratory analyses including total alkalinity, nitrogen and phosphorus in H<sub>2</sub>O and bottom samples, chlorophyll
- Geographic Information Systems (GIS)
- cultural resources surveys
- reports and impact statements
- public participation programs

**Appendix A: Aerial Photograph of Subject Property and Access Points**

